DRAFT ASSESSMENT CRITERIA
12/09/04

A. Criteria for General Application

1. Technical Quality and Merit

Relative technical caliber:
- How does the technical quality of the laboratory compare to current state-of-the-art capabilities worldwide?
- Does the laboratory work product consistently demonstrate evidence of high technical quality (including but not limited to papers in high impact technical publications; invited talks to major scientific and industry conferences and workshops; and external awards and recognition)?

Distinctiveness:
- Do the projects reflect a broad understanding of comparable work being done elsewhere (other government laboratories, universities, and industry)?
- Are there demonstrable links between NIST researchers and the external community?

Balance:
- Does the laboratory adequately balance anticipatory, longer-term research and activities that respond to immediate customer needs?

2. Effectiveness

Dissemination:
- Is the laboratory regularly implementing sound and effective techniques and practices for delivering products and services?
- Are the results of the laboratory work program readily available to customers?

Impact: Will the laboratory work program have a consequential, long-term impact?

3. Relevance

Mission focus:
- Is the laboratory pursuing unique measurement and standards activities that clearly support high priority national needs?
- Is there a clear tie to NIST Strategic Focus Areas, Strategic Plan, or other NIST objective?

Customer focus: Is the research program focused on clear and compelling industry / customer needs?

Level of effort: Is the research program scaled appropriately to meet the technical problems being addressed?

Responsiveness: Is the research program moving at a pace and in a direction that is well matched to current and emerging customer needs?

4. Adequacy of facilities, equipment, and human resources

Critical mass: Are the available scientific and technical competencies adequate to achieve success?

Available tools: Is the state of the equipment and facilities adequate to meet program objectives and customer needs?

Agility: Is the laboratory sustaining the technical competencies and capacity to respond quickly to critical issues as they arise?

December 3, 2003

MEMORANDUM FOR Board on Assessment of NIST Programs and its Panels

From: Arden L. Bement, Jr., Director /s/

Subject: Charge to the National Research Council Board on Assessment of NIST Programs for FY 2004/2005

As you may have heard, NIST has decided to go to a biennial review process that will entail a formal technical assessment, full panel meetings, and a written report only every other year. The next assessment, full panel meeting, and report will be made in FY2005. The formal assessment is carried out by panels assigned to each of the Laboratories' seven major operating units. Individual programs and divisions of the operating units are assigned to smaller subpanels which comprise the operating unit panels. In FY 2004, subpanels assigned to NIST divisions will visit technical staff for the purpose of maintaining familiarity with NIST division programs. In FY 2005, division meetings will be held with the subpanels to perform the technical assessment of division programs. These will be followed by full panel meetings to perform the laboratory reviews.

For the FY 2004/2005 assessment cycle, I ask that the Board on Assessment focus its assessment of the NIST Laboratories on three factors:

- the technical quality and merit of the laboratory programs relative to the state-of-the-art worldwide;
- the effectiveness with which the laboratory programs are carried out and the results disseminated to customers; and
- the relevance of the laboratory programs to the current and future needs of customers.

As part of its assessment of these three factors, I ask the Board and its Panels to consider the adequacy of the Laboratories' facilities, equipment, and human resources to enable the Laboratories to fulfill their mission and meet their customers' needs.

The context for this technical assessment is NIST's mission to develop and promote measurement, standards, and technology, to enhance productivity, to facilitate trade, and to improve the quality of life. The NIST Laboratories conduct research to anticipate future metrology and standards needs, to enable new scientific and technological advances, and to improve and refine continuously existing measurement methods and services.

We are extremely grateful to the members of the Board on Assessment and its panels for the time, effort, and expertise that are devoted to evaluating the technical quality of NIST's laboratory programs. Your findings communicated through your reports and meetings are a central component of our performance evaluation system, and they help NIST remain a significant national asset that is recognized as the world's leading measurement and standards organization. NIST highly values your hard work and insights in assessing our laboratory programs, and as always we look forward to working closely and productively with you in FY 2004/2005. We rely on your input to identify areas where NIST can improve.

With its mix of experts from industry, academia, and government agencies, the Board is well- positioned to help NIST evaluate the technical merit of our laboratory programs on each of the three factors listed above. As in past years, your findings will be used by NIST internally for continuous improvement in each area of evaluation and externally for reporting to key stakeholders on the quality, relevance, and performance of the NIST Laboratories. NIST's key stakeholders, including the Department of Commerce, the Administration, and Congress, use your findings to help ensure an optimal return on the investment of resources by the American people in NIST. The Board's reports, statements, and briefings-based on

independent and comprehensive expert peer review-are a cornerstone of NIST's performance evaluation system and are featured prominently in our reports to the Administration and Congress under the terms of the Government Performance and Results Act (GPRA) and the Office of Management and Budget (OMB) R&D investment criteria.

We anticipate that changing to the two-year assessment cycle will continue to provide the excellent assessment of NIST programs that we have always valued. We also believe that this new cycle will provide increased opportunities for staff interactions and panel familiarization with NIST's programs. NIST looks forward to receiving the Board's published report, which provides a thorough and comprehensive assessment of great value to NIST and our stakeholders.

Again, I thank you for contributing your time and expertise to assess the quality and relevance of NIST's laboratory programs. Your expert, objective appraisal is crucial to helping NIST continuously improve its programs and effectiveness.

cc:
Senior Management Board
Program Office
Jim McGee